Micro-Preemie Parents' Perceptions of New Care Model and the NICU's Readiness to Integrate Evidence-based Practice

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Background- State of the Evidence

- Micro-preemies (<26 week gestation)
  - Significant implications
- Neonatal Integrative Developmental Care (NIDC)
  - Neuroprotective, family-centered, multidisciplinary care
  - Designed to mitigate the negative effects of noxious stimuli
    - Noise, light, stimulation, negative touch, temperature, multiple caregivers
  - Improve outcomes and parents' perceptions of nursing care

Attempt to Simulate Womb

- Area designated as Small Baby Room (SBR)
- Targeted sensory areas/neuroprotection

- Touch: Minimize touch
  Kangaroo care
- Hearing: Soft voices in SBR
  Alarm volume low
- Smell: Scent cloths
- Sight: Minimal lighting
  Isolettes covered
- Taste: Colostrum swab w/in 24 hr
- Proprioception: Positioning/handling

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Nurses Readiness to Adopt New Model

- Nurses readiness to implement EBP
  - Preparation: 8 one-hour classes focused on new care model with 7 neuroprotective core measures
  - All nurses encouraged to attend
  - Intentional
  - Consistent
  - Empower parents to be part of team

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Study Aims

- Ascertain parents of micro-preemies perceptions' of new care model
- Evaluate the nurses' perceptions of readiness to integrate EBP

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Methods: Parents

- Single-site: 56-bed level III NICU
- Parent completed the Nurse Parent Support Tool (Miles, 1998)
- Measures parents' perceptions of nursing support and care
  - 21-item five-point Likert-type scale
  - Ranked from 1 to 5
  - Included two open-ended questions
- Higher scores indicate greater degrees of perceived support from the nursing staff

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Methods: Nurses

- Surveyed at 0, 6, 12 mo: *Organizational Culture & Readiness Survey for Integration of Evidence-based Practice- UNIT* (Melnyk & Fineout-Overholt)
- Measures:
  - nurses' perceptions of the readiness to implement EBP
  - the degree of influence cultural factors exert on implementation of EBP
- Higher scores indicate:
  - greater perceived readiness to integrate EBP into nursing practice
  - greater organizational readiness for or movement towards EBP

Sample

Parents

- Parents of infants ≥23 but < 26 week gestation
- No major congenital anomaly
- Invited when infant's LOS in SBR ≥ 30 days

NICU Nurses

- 13-hour shifts
- Approximately 100 nurses
- All NICU nurses invited
- All RNs could be placed in SBR

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Results: Parents

- Far fewer births during study period than expected
- Eligible parent pairs of micro-preemie infants (N= 26)
  - 15 parents completed the questionnaire
    - Parents ages 21- 42 years (*M* = 32)
    - Infant's gestational ages ranged from 23 weeks + 0 days to 25 weeks + 6 days (*M*= 24 weeks 4 days)

Demographics

Parents	N (%)
Parent:	
Mother	12 (80%)
Father	3 (20%)
Ethnicity:	
African American	3 (20%)
Asian	1 (6.7%)
Caucasian/White	7 (46.7%)
Hispanic/Latino	2 (13.3%)
Not reported	2 (13.3%)

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Parents Survey: NPST

- Cronbach's alpha .95
- Total scores ranged 77-105 (M = 97.07, SD 9.57)
- Item scores ranged from 3.66 – 5 (M = 4.62)
- Item weighted averages ranged from 4 - 4.93
  - Gave good care to my baby.
  - Responded to my worries or concerns.

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Parents: Survey

- Overwhelmingly felt supported by nurses
- Recognized high quality of care given to infant
- Verified parents' high degree of perceived support from nurses

Open-ended responses

- Included two open-ended questions:
  - Are there other things the nurses have done that have been helpful to you as a parent?
  - Are other things that you wish the nurses would do to help you as a parent?
- Themes
  - Felt cared for and appreciated the care given to infant
  - Treasured the input from nurses in learning to care for *their* baby
  - Valued their inclusion in the plan and execution of infant's care
  - Appreciated the nurses' explanations, daily email updates

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Nurse Survey: OCRSIEP-UNIT

- Completed survey either on unit or from home
- Responses were not paired
- Inconsistent understanding of EBP
- Reluctance of staff to participate

Nurse Survey: OCRSIEP-UNIT

Time	# of Responses	Ranges of Total Scores	Total Score Mean (SD)	Range of Item Scores	Item Mean (SD)
Baseline	38	36 - 122	78.54 (18.58)	1.38 – 4.69	2.95 (0.77)
6 Months	52	54 - 118	81.37 (15.50)	2.07 – 4.54	3.15 (0.61)
12 Months	24	54 - 111	85.42 (16.36)	2.08 – 4.27	3.31 (0.62)

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Nurse Survey

	Baseline	6 Months	12 Months
NICU's Readiness to Implement EBP	3	3.35	3.46
Movement Towards a Culture of EBP	3.05	3.28	3.46

($\alpha = 0.95$) No statistical difference between groups ($p < .05$)

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Perceived barriers influencing readiness to integrate EBP

System

- Limited input from staff as to new care model
- NICU Nurse Educator on LOA for entire duration of study
- Nurse Manager resigned at midpoint
- Uncertainty as NICU prepared for transition to new unit

Individual Nurses

- Many graduated >20 years ago
- Confusion about constitutes EBP; lack of knowledge, skills
- Worries about management identifying responses and possible retribution

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Observations

- Initially, nurses verbalized resistance to many of the components (especially minimal lighting and alteration in assessment schedule)
- Components were "applied" to other areas within the NICU
- Nurses were implementing the new care model well in SBR
- Nurses volunteered to be Primary Nurse for individual infants; remained throughout hospitalization
- Nurses language changed from "my baby" to the *mother's* baby

Conclusion/Implications

- Parents felt supported; developed strong bonds with the nurses caring for their infants.
- Parents more readily participated in their infant's care
- Organizational culture evolves slowly towards a culture of EBP
- Additional organizational support is required to execute a major change in practice
- Planning requires intentionality, ongoing education, and interventions to promote and support change

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Further Research

- Identify additional ways to promote collaboration between parents and the health care team
- Design strategies to overcome barriers
- Consider alternate strategies and interventions to promote a culture of EBP

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